

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2005/001644

International filing date (day/month/year)
17.02.2005

Priority date (day/month/year)
17.02.2004

International Patent Classification (IPC) or both national classification and IPC
A61P25/32, A23L1/29, A23L1/30, A61K31/7004, A61K31/194, A61K31/375, A61K31/195, A61K31/198, .

Applicant
MATUSCHKA-GREINFFENCLAU, Markus Graf V.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1 (a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2005/001644

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. II Priority

1. ☒ The validity of the priority claim has not been considered because the International Searching Authority does not have in its possession a copy of the earlier application whose priority has been claimed or, where required, a translation of that earlier application. This opinion has nevertheless been established on the assumption that the relevant date (Rules 43bis.1 and 64.1) is the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2005/001644

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 18

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 18 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

☒ the claims, or said claims Nos. 18 are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the whole application or for said claims Nos.

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☒ See separate sheet for further details

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2005/001644

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|------|
| Novelty (N) | Yes: Claims | 1-18 |
| | No: Claims | |
| Inventive step (IS) | Yes: Claims | 1-18 |
| | No: Claims | |
| Industrial applicability (IA) | Yes: Claims | 1-18 |
| | No: Claims | |

2. Citations and explanations

see separate sheet

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

III.1 Independent claim 18 attempts to define the subject-matter by way of desiderata, without mentioning the technical features of the claimed composition which allow to obtain these desired properties. The claim thus lacks clarity (Art. 6 PCT). Besides, the description provides disclosure to that claim in the meaning of Art. 5 PCT for compositions according to claims 1-17 only. Thus, in accordance to the International Search Report that claim was assessed as relating to a composition according to any of claims 1-17.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

V.1 Reference is made to the following documents:

- D1: US 2002/006910 A1 (MIASNIKOV DMITRI ET AL) 17 January 2002
- D2: WO 03/006073 A (PENAM INVESTMENTS PTY LTD; MCGREGOR, NEIL, ROLAND) 23 January 2003
- D3: FR-A-2 748 935 (CLERGEAUD JEAN) 28 November 1997
- D4: GB-A-2 308 810 (SOBERING THOUGHTS LIMITED) 9 July 1997
- D5: PATENT ABSTRACTS OF JAPAN vol. 014, no. 334 (C-0742), 18 July 1990 & JP 02 124084 A (AJINOMOTO CO INC), 11 May 1990
- D6: EP-A-0 185 117 (IPEX GETRANKE-HERSTELLUNGS- UND VERTRIEBSGESELLSCHAFT MBH) 25 June 1986

V.2 Novelty and inventive step

V.2.1 None of the above cited documents discloses a composition comprising the 7 ingredients or group of ingredients according to independent claim 1. Thus, the subject-matter of claim 1 and of claims 2-17 dependent thereof is new (Art. 33 (2) PCT).

V.2.2 Document D1 is considered to be the closest prior art, as it discloses compositions for the treatment of "hangover" which comprise succinic acid, fumaric acid, ascorbic acid, and a sugar such as glucose. Taking D1 as the closest prior art the new objective problem to be solved may be seen as the provision of an improvement over the compositions of D1. This was achieved in the present invention by the further addition of cysteine, riboflavin and coenzyme Q10. According to p.5-7 of the description of the present application, each of these compounds has a defined role in the composition of the present invention. None of D2-D6 suggests adding all of these ingredients for obtaining the desired effects. Indeed, while cystine, riboflavine (vitamin B2), and a glutamic acid component are suggested by D2, that document makes no specific reference to glutamine and absolutely no reference to coenzyme Q10. Further, none of D3-D4 and D6 suggests using coenzyme Q10. On the other hand, document D5 suggests using glutamine also for the modulation of the toxicity of aldehydes for the prevention of hangover, but makes no mention of the other components. Thus, the subject-matter of claims 1-17 is not derivable from the prior art and involves an inventive step (Art. 33 (3) PCT).

V.3 The subject-matter of claims 1-17 is industrially applicable in the sense of Art. 33 (4) PCT.

V.4 The opinions expressed on points V.2.1, V.2.2. and V.2.3 also apply to independent claim 18 under the restriction mentioned under III.1 above.